

AMENDMENTS TO THE CLAIMS

Kindly amend the claims as follows:

**CLAIMS**

Claim 1. (currently amended): A micro-dispensing nozzle comprising:

a housing with at least one exit orifice;

a magnetostrictive valve in proximity to said orifice, said magnetostrictive valve having an open state and a closed state;

a means for applying a magnetic field to said magnetostrictive valve, said magnetostrictive valve changing shape in response to said magnetic field, said changing shape causing said orifice to change states[-];

an x-y positioner holding said housing for allowing said nozzle to be stepped through an array of x-y spot positions.

Claim 2. (original): The magnetostriictive dispensing nozzle of claim 1 wherein said magnetostriictive valve contains a magnetostriictive rod.

Claim 3. (original): The magnetostriictive dispensing nozzle of claim 2 wherein said magnetostriictive rod lengthens under application of a magnetic field.

Claim 4. (original): The magnetostriictive dispensing nozzle of claim 3 wherein said magnetostriictive rod is held in a pre-extended state by a bias magnetic field.

Claim 5. (original): The magnetostriictive dispensing nozzle of claim 4 wherein said pre-extended state of said magnetostriictive rod is relaxed upon application of a control magnetic field, whereby said rod contracts upon application of said control magnetic field causing said orifice to open.

Claims 6-7 (withdrawn).

Claim 8. (original): The magnetostriictive dispensing nozzle of claim 1 wherein said housing contains an entrance orifice, said entrance orifice coupled to a precision pump.

Claim 9. (currently amended) : The magnetostriictive dispensing nozzle of claim 1 [~~wherein said means for means for applying a magnetic field is a magnetic field coil exterior to said housing.~~] further comprising a plurality of nozzles attached to said x-y positioner.

Claim 10. (currently amended) : A magnetostriictive valve to control pico-liter flow from a fluid containing housing, said valve comprising a magnetostriictive rod extending into an exit orifice of said housing, said valve being extended to close said exit orifice by a bias magnetic field, said rod responding to an applied control magnetic field to contract allowing said exit orifice to open, said housing being attached to an x-y positioner wherein said housing and valve can be stepped to a plurality of x,y positions.

Claim 11. (original) : The magnetostriictive valve of claim 10 wherein said rod is around 2 mm in diameter.

Claim 12. (original) : The magnetostriictive valve of claim 10 wherein said rod is around 30 mm in length.

Claim 13. (original): The magnetostriictive valve of claim 10 wherein said bias magnetic field is supplied by a permanent magnetic.

Claim 14. (original): The magnetostriictive valve of claim 10 wherein said magnetostriictive rod is operated faster than 1 kHz.

Claim 15. (currently amended): A magnetostriictive valve method comprising the steps of:

placing a piece of magnetostriictive material in proximity to an exit orifice of a fluid containing housing;

maintaining pressure on fluid in said fluid containing housing;

applying a magnetic field to said magnetostriictive material to cause said magnetostriictive material to change shape, whereby said exit orifice is blocked or un-blocked according to said magnetic field[-];

attaching said housing to an x-y positioner wherein  
said positioner can step to a plurality of x-y  
positions.

Claim 16. (original): The magnetostriictive valve method of  
claim 15 wherein said magnetostriictive material is a  
magnetostriictive rod.

Claim 17. (original): The magnetostriictive valve method of  
claim 16 further comprising the step of pre-extending said  
magnetostriictive rod with a bias magnetic field.

Claim 18. (original): The magnetostriictive valve method of  
claim 17 wherein said bias magnetic field is supplied from  
a permanent magnet.

Claim 19. (original): The magnetostriictive valve method of  
claim 15 wherein said pressure is maintained by a precision  
pump.

Claim 20. (currently amended): The magnetostriictive valve  
method of claim 19 [~~wherein controlling of said pump and~~  
~~controlling of applying said magnetic field is by a~~

processor.] wherein said housing contains a plurality of  
said nozzles.